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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/003,531	DESHPANDE, SACHIN G.	
	Examiner	Art Unit	
	George C. Neurauter, Jr.	2143	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *22 May 2006*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-8,10-15,18-20 and 22-46* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-8,10,12-15,18-20,22,24-36 and 38-46* is/are rejected.

7)☒ Claim(s) *11,23 and 37* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claims 1-8, 10-15, 18-20, and 22-46 are currently presented and have been examined.

Continued Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 22 May 2006 has been entered.

Response to Arguments

Applicant's arguments with respect to claims 1-8, 10, 12-15, 18-20, 22, 24-36, and 38-46 have been considered but are moot in view of the new ground(s) of rejection.

Claim Interpretation

The element "user data" or "multimedia data" defined on page 3, lines 19 and 26-27 of the specification as admitted by the Applicant and recited in claims 1-39 will be given its broadest reasonable interpretation and will be interpreted by the Examiner as data that comprises audio, video, or any other data, or a combination of any or all of them that is consistent

with the disclosures of the specification and the interpretation that those skilled in the art would reach. See MPEP § 2111.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 24-39 and 44-45 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 24 recites "the data server". This limitation lacks proper antecedent basis.

Claim 29 recites "the communication link". It is unclear which communication link is being referred to.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims are rejected under 35 U.S.C. 103(a) as being unpatentable over "Virtual Network Computing" in view of US Patent 6 738 822 to Fukasawa et al.

Regarding claim 1, "VNC" discloses a system for transmitting data (referred to throughout the reference as "VNC system"), comprising:

a server ("VNC server"; see Figure 1 on page 35) operable to generate user data ("pixel data") for use at a client station ("VNC viewer"; see Figure 1 on page 35); (page 33, specifically "In the virtual network computing (VNC) system, server machines supply not only applications and data but also an entire desktop environment that can be accessed from any Internet-connected machine...")

a client station ("VNC viewer") coupled to the server and structured to receive compressed data; a decoder component of

the client station that is operable to transform the compressed data into a frame portion and an image generator structured to generate an image from the frame portion and show the image in a form for use by a user of the client station (page 35, Figure 1 and specifically, "The technology underlying the VNC system is a simple protocol for remote access to graphical user interfaces. It works at the framebuffer level...The endpoint with which the user interacts (that is, the display and/or display devices is called the VNC client or viewer. The endpoint where changes to the framebuffer originate...is known as the VNC server...An update represents a change from one valid framebuffer state to another. In this sense, an update is similar to a frame of video...an update is only sent by the server in response to an explicit request from the client. All screen changes since the client's last request are coalesced into a single update."), wherein the server and the client station are coupled to one another by a communication link ("Internet") (page 33, specifically "In the virtual network computing (VNC) system, server machines supply not only application and data but also an entire desktop environment that can accessed from any Internet connection machine..."), and wherein the server and the client station communicate to one another over the communication link

using a remote desktop communication protocol ("VNC protocol"). (page 35, specifically Figure 1)

"VNC" does not expressly disclose a spatial compressor component of the server, that is operable to inspect the user data and generate spatially compressed data therefrom and a temporal compressor component of the server that is operable to inspect the user data and generate temporally compressed data therefrom and wherein the temporal compressor is adapted to XOR a portion of the user data from a current frame with a portion of the user data having a same spatial location in a previous frame to generate a difference map if the portion of the user data from the previous frame is in cache and wherein the temporal compressor is adapted to generate a difference table by run length encoding each row of the difference map, however, "VNC" does disclose wherein the server uses MPEG encoding that inspects user data and generates compressed data therefrom (page 35, specifically "The endpoint where changes to the frame buffer originate (that is, the windowing system and applications) is known as the VNC server... there are numerous other possible schemes [for encoding]...MPEG encoding.").

It is inherent within the teachings of "VNC" that the MPEG encoding component contains a spatial and temporal compressor that generate spatial and temporal compressed data from user

data wherein the temporal compressor is adapted to XOR a portion of the user data from a current frame with a portion of the user data having a same spatial location in a previous frame to generate a difference map if the portion of the user data from the previous frame is in cache and wherein the temporal compressor is adapted to generate a difference table by run length encoding each scan line of the difference map. The Examiner recognizes that to establish inherency, extrinsic evidence must make clear that the missing descriptive matter is necessarily present in the thing described in the reference, and that it would be so recognized by persons of ordinary skill. See *In re Robertson*, 169 F.3d 743, 745, 49 USPQ2d 1949, 1950-51 (Fed. Cir. 1999). The Examiner cites in this Office Action as extrinsic evidence "MPEG-1" which disclose that the MPEG encoding component contains a spatial and temporal compressor which takes a signal and performs a spatial and temporal compression on the signal (page 2, specifically the paragraph "A number of techniques are used to achieve a high compression ratio..."). The Examiner further cites US Patent 5 515 388 to Yagasaki which concurs with the findings above and also discloses wherein the temporal compressor is adapted to XOR a portion of the user data from a current frame with a portion of the user data having a same spatial location in a previous frame

to generate a difference map if the portion of the user data from the previous frame is in cache and wherein the temporal compressor is adapted to generate a difference table by run length encoding each scan line of the difference map (column 3). Therefore, the extrinsic evidence provides a sufficient basis in fact and/or technical reasoning to reasonably support the determination that the allegedly inherent characteristic necessarily flows from the teachings of the applied prior art." See *Ex parte Levy*, 17 USPQ2d 1461, 1464 (Bd. Pat. App. & Inter. 1990) and MPEP 2112.

"VNC" does not expressly disclose a data server responsive to commands from the client station, coupled to the server through a second communication link, the server and the data server communication using a communication protocol other than the remote desktop communication protocol used by the server and the client station, however, Fukasawa does disclose these limitations (column 2, line 63-column 3, line 19; column 6, lines 7-27, specifically lines 19-24; column 7, lines 50-65).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of these references since Fukasawa discloses that communication with a data server using a different communication protocol may be necessary since the data server may require the use of such a

protocol that is different from the client (column 6, lines 7-27, specifically lines 19-24) Fukasawa also discloses that using a data server also allows for the prevention reduction of video delivery efficiency over multiple platforms (column 2, lines 32-25). In view of these specific advantages and that the references are directed to rendering and delivering image data to a client, one of ordinary skill would have been motivated to combine these references and would have considered them to be analogous to one another based on their related fields of endeavor, which would lead one of ordinary skill to reasonably expect a successful combination of the teachings.

Claim 15 is also rejected since claim 15 recites a system for transferring data that recites substantially the same limitations as recited in claim 1.

Regarding claim 2, "VNC" and Fukasawa disclose the system of claim 1.

"VNC" does not expressly disclose where the data server is structure to complete a functional task requested by the client station, however, Fukasawa does disclose this limitation (column 2, line 63-column 3, line 19; column 6, lines 7-27, specifically lines 19-24; column 7, lines 50-65, specifically lines 51-52).

Claim 2 is rejected since the motivations regarding the obviousness of claim 1 also apply to claim 2.

Regarding claim 3, "VNC" and Fukasawa disclose the system of claim 2.

"VNC" does not expressly disclose wherein the functional task is to display a video, and the data server is structured to stream a video clip to the server that communicates the video clip to the client station, however, Fukasawa does disclose these limitations (column 7, lines 50-65).

Claim 3 is rejected since the motivations regarding the obviousness of claim 1 also apply to claim 1.

Claim 46 is rejected since claim 46 recites substantially the same limitations as recited in claim 1 and 3 in combination.

Regarding claim 4, "VNC" and Fukasawa disclose the system according to claim 1.

"VNC" does not expressly disclose wherein the data server is a video server, however, Fukasawa does disclose this limitation (column 7, lines 50-65).

Claim 4 is rejected since the motivations regarding the obviousness of claim 1 also apply to claim 4.

Regarding claim 5, "VNC" and Fukasawa disclose the system according to claim 1.

"VNC" discloses the system further comprising one or more additional client stations each of which is coupled to the server and structured to receive the spatially compressed data

and the temporally compressed data. (pages 33 and 34, specifically "In addition, VNC allows a single desktop to be accessed from several places simultaneously, thus supporting application sharing...")

Claim 19 is rejected since claim 19 recites a system for transferring data that recites substantially the same limitations as recited in claim 5.

Regarding claim 6, "VNC" and Fukasawa disclose the system according to claim 1.

"VNC" discloses wherein the frame portion is a bitmap. (page 35, specifically "A set of rectangles of pixel data makes a framebuffer update...")

Regarding claim 7, "VNC" and Fukasawa disclose the system according to claim 1.

"VNC" discloses wherein the frame portion is one frame of a video. (page 35, specifically "MPEG encoding for moving images" and "An update represents a change from one valid framebuffer state to another...an update is similar to a frame of video")

Regarding claim 13, "VNC" discloses the system according to claim 1.

"VNC" discloses the system further comprising a comparison component of the server that is operable to examine the user data, the spatially compressed data, and the temporally

compressed data, and to select any combination therefrom to transmit to the client station. (page 35, specifically "Each rectangle may be encoded using a different scheme. The server can therefore choose the encoding most appropriate for the particular screen content being transmitted and the available network bandwidth.")

Regarding claim 14, "VNC" and Fukasawa disclose the system according to claim 13.

"VNC" discloses wherein the comparison component is structured to select the smallest combination or sub-combination of the user data, the spatially compressed data, and the temporally compressed data prior to transmitting it to the client station. (page 35, specifically "Each rectangle may be encoded using a different scheme. The server can therefore choose the encoding most appropriate for the particular screen content being transmitted and the available network bandwidth.")

Regarding claim 24, "VNC" discloses a method of transferring data in a system including a server coupled to a thin client, the method comprising:

on the server ("VNC server"):

generating multimedia data; compressing the multimedia data to make compressed multimedia data; transmitting a difference table to the thin client using a second communication link

distinct from another communication link that uses a second communication protocol different from the first communication protocol ("VNC protocol"); (page 33, specifically "In the virtual network computing (VNC) system, server machines supply not only applications and data but also an entire desktop environment that can be accessed from any Internet-connected machine..."; page 35, specifically "The endpoint where changes to the frame buffer originate (that is, the windowing system and applications) is known as the VNC server... there are numerous other possible schemes [for encoding]...")

on the thin client ("VNC client" or "VNC viewer"; page 35, specifically "VNC is truly a 'thin-client' system."):

receiving the difference table from the server; de-compressing the difference table into useable data; and presenting the useable data on the thin client. (page 35, Figure 1 and specifically, "The technology underlying the VNC system is a simple protocol for remote access to graphical user interfaces. It works at the framebuffer level...The endpoint with which the user interacts (that is, the display and/or display devices is called the VNC client or viewer. The endpoint where changes to the framebuffer originate...is known as the VNC server...An update represents a change from one valid framebuffer state to another. In this sense, an update is

similar to a frame of video...an update is only sent by the server in response to an explicit request from the client. All screen changes since the client's last request are coalesced into a single update.")

"VNC" does not expressly disclose compressing the multimedia data temporally and spatially wherein temporal compression occurs by performing an XOR a portion of the user data from a current frame with a portion of the user data having a same spatial location in a previous frame to generate a difference map if the portion of the user data from the previous frame is in cache and wherein the temporal compressor is adapted to generate a difference table by run length encoding each row of the difference map, however, "VNC" does disclose wherein the server uses MPEG encoding that inspects user data and generates compressed data therefrom (page 35, specifically "The endpoint where changes to the frame buffer originate (that is, the windowing system and applications) is known as the VNC server... there are numerous other possible schemes [for encoding]...MPEG encoding.")

Claim 24 is rejected for the same reasons for the findings of inherency as provided for claim 1.

"VNC" does not expressly disclose wherein the server establishes a first communication link between the server and a

data server that uses a first communication protocol to supply multimedia data, however, Fukasawa does disclose these limitations (column 2, line 63-column 3, line 19; column 6, lines 7-27, specifically lines 19-24; column 7, lines 50-65)

Claim 24 is rejected since the motivations regarding the obviousness of claim 1 also apply to claim 24.

Regarding claim 25, "VNC" and Fukasawa disclose the method of claim 24.

"VNC" discloses the method further comprising storing the useable data in a cache on the thin client. ("framebuffer"; page 35, Figure 1 and specifically, "The technology underlying the VNC system is a simple protocol for remote access to graphical user interfaces. It works at the framebuffer level...")

Regarding claim 26, "VNC" and Fukasawa disclose the method of claim 24.

"VNC" discloses wherein presenting the useable data on the thin client comprises generating an image on a display screen. (page 35, Figure 1 and specifically, "The technology underlying the VNC system is a simple protocol for remote access to graphical user interfaces.")

Regarding claim 27, "VNC" and Fukasawa disclose the method of claim 24.

"VNC" discloses wherein presenting the useable data on the thin client comprises showing a video clip on a display coupled to the thin client. (page 35, specifically "MPEG encoding for moving images" and "An update represents a change from one valid framebuffer state to another...an update is similar to a frame of video")

Regarding claim 28, "VNC" and Fukasawa disclose the method of claim 27.

"VNC" discloses wherein showing a video clip comprises showing a series of frames on the display. (page 35, specifically "MPEG encoding for moving images" and "An update represents a change from one valid framebuffer state to another...an update is similar to a frame of video")

Regarding claim 29, "VNC" and Fukasawa disclose the method of claim 27.

"VNC" does not expressly disclose wherein generating the multimedia data comprises: establishing the communication link; retrieving video data from the data server; and converting the video data to display data, however, Fukasawa does disclose these limitations (column 2, line 63-column 3, line 19; column 6, lines 7-27, specifically lines 19-24; column 7, lines 50-65).

Claim 29 is rejected since the motivations regarding the obviousness of claim 1 also apply to claim 29.

Regarding claim 30, "VNC" and Fukasawa disclose the method of claim 24.

"VNC" discloses wherein a plurality of thin clients are coupled to the server, the method further comprising transmitting the compressed multimedia data to the plurality of the thin clients coupled to the server. (pages 33 and 34, specifically "In addition, VNC allows a single desktop to be accessed from several places simultaneously, thus supporting application sharing...")

Regarding claim 31, "VNC" and Fukasawa disclose the method of claim 30.

"VNC" discloses wherein transmitting the compressed multimedia data to the plurality of the thin clients comprises transmitting the compressed multimedia data to the plurality of thin clients simultaneously. (pages 33 and 34, specifically "In addition, VNC allows a single desktop to be accessed from several places simultaneously, thus supporting application sharing...")

Regarding claim 32, "VNC" and Fukasawa disclose the method of claim 24.

"VNC" discloses wherein de-compressing the compressed multimedia data comprises creating bitmaps of data. (page 35, specifically "The display side of the protocol is based on a

single graphics primitive: Put a rectangle of pixel data at a given x,y position.")

Regarding claim 35, "VNC" and Fukasawa disclose the system according to claim 34.

"VNC" discloses the system further comprising encoding a plurality of difference codes. (see "MPEG-1", specifically "The algorithm uses block-based motion compensation to reduce the temporal redundancy.")

Regarding claim 38, "VNC" and Fukasawa disclose the method according to claim 24.

"VNC" discloses wherein compressing the multimedia spatially and temporally comprises:

performing a procedure on the multimedia data intended to compress the multimedia spatially and determining if the first procedure created a result smaller than the multimedia data. (page 35, specifically "Each rectangle may be encoded using a different scheme. The server can therefore choose the encoding most appropriate for the particular screen content being transmitted and the available network bandwidth.")

Regarding claim 39, "VNC" and Fukasawa disclose the method according to claim 24.

"VNC" discloses wherein compressing the multimedia spatially and temporally comprises:

performing a procedure on the multimedia data intended to compress the multimedia temporally and determining if the procedure created a result smaller than the multimedia data. (page 35, specifically "Each rectangle may be encoded using a different scheme. The server can therefore choose the encoding most appropriate for the particular screen content being transmitted and the available network bandwidth.")

Regarding claims 40 and 42, "VNC" and Fukasawa disclose the system of claim 1 and 15 respectively.

"VNC" discloses where the client station or thin client includes the cache ("framebuffer") (page 3, section "A Single Graphics Primitive", specifically "For example, copy-rectangle encoding is very simple and efficient, and can be used when the client already has the same pixel data elsewhere in its framebuffer...A pixel-data caching scheme could efficiently encode multiple occurrences of the same text character by referring to the first occurrence"), wherein the server is adapted to store the user data from the previous frame to compare with the user data from the current frame to produce a coded difference, and to send the coded difference to the client station. (page 33, specifically "In the virtual network computing (VNC) system, server machines supply not only applications and data but also an entire desktop environment

that can be accessed from any Internet-connected machine..."; page 35, specifically "The endpoint where changes to the frame buffer originate (that is, the windowing system and applications) is known as the VNC server... there are numerous other possible schemes [for encoding]...")

Regarding claims 41 and 43, "VNC" discloses the system of claim 1 and 15 respectively.

"VNC" does not expressly disclose where the temporal compressor is adapted to indicate to the server that it should transmit the difference map to the client station if difference map is smaller than the portion of the user data from the current frame, however, "VNC" does disclose where the server transmits the difference map to the client station if difference map is smaller than the portion of the user data from the current frame (page 3, section "A Single Graphics Primitive", specifically "For example, copy-rectangle encoding is very simple and efficient, and can be used when the client already has the same pixel data elsewhere in its framebuffer...A pixel-data caching scheme could efficiently encode multiple occurrences of the same text character by referring to the first occurrence"; page 3, "Adaptive Update", specifically "A set of rectangles of pixel data makes a frame buffer updates (or simply, update). An update represents a change from one valid

framebuffer to another...it usually affects only a small area of the framebuffer...All screen changes...are coalesced into a single update.").

Claims 41 and 43 are subject to the findings of inherency as provided for claim 1 and 15.

Regarding claim 44, "VNC" discloses the method of claim 24 where determining if the portion of the user data from a current frame is stored in the cache includes determining if the portion of the user data from a current frame is stored in the cache by keeping track of the cache contents of the thin client cache (page 3, section "A Single Graphics Primitive", specifically "For example, copy-rectangle encoding is very simple and efficient, and can be used when the client already has the same pixel data elsewhere in its framebuffer...A pixel-data caching scheme could efficiently encode multiple occurrences of the same text character by referring to the first occurrence"; page 3, "Adaptive Update", specifically "A set of rectangles of pixel data makes a frame buffer updates (or simply, update). An update represents a change from one valid framebuffer to another...it usually affects only a small area of the framebuffer...All screen changes...are coalesced into a single update.").

Regarding claim 45, "VNC" discloses the method of claim 24 where transmitting the difference table to the thin client

occurs responsive to a determination that the difference table is smaller than the multimedia data. (page 3, section "A Single Graphics Primitive", specifically "For example, copy-rectangle encoding is very simple and efficient, and can be used when the client already has the same pixel data elsewhere in its framebuffer...A pixel-data caching scheme could efficiently encode multiple occurrences of the same text character by referring to the first occurrence"; page 3, "Adaptive Update", specifically "A set of rectangles of pixel data makes a frame buffer updates (or simply, update). An update represents a change from one valid framebuffer to another...it usually affects only a small area of the framebuffer...All screen changes...are coalesced into a single update.")

1. Claims 8, 20, and 34-35 are rejected under 35 U.S.C. 103(a) as being unpatentable over "VNC" and Fukasawa, and in further view of US Patent 5 864 711 to Mairs et al.

Regarding claim 8, "VNC" and Fukasawa disclose the system according to claim 1.

"VNC" and Fukasawa do not expressly disclose wherein the user data comprises data that is for the use of the client station at a first and a second time, wherein the temporal compressor is structured to perform an XOR operation using data for the use of the client station at the first and the second

time as inputs, and produce a difference output, however, "VNC" does disclose wherein the server uses MPEG encoding that inspects user data and generates compressed data therefrom as shown above and wherein the MPEG protocol inherently contains a temporal compressor that performs an operation using data for the use of the client station at the first and the second time as inputs and produce a difference output (see "MPEG-1", specifically "The algorithm uses block-based motion compensation to reduce the temporal redundancy.")

Mairs does disclose performing an XOR operation (column 16, lines 16-23 and 40-67).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of these references since Mairs discloses that the method of compressing data using a temporal compressor to produce a differential output enables the output data to a client station to be transmitted in an optimal matter (column 2, lines 6-10). In view of these specific advantages and that both references are directed to transmitting data from a server to a client station using temporal compression, one of ordinary skill would have been motivated to combine these references and would have considered them to be analogous to one another based on their related fields of endeavor.

Claims 20 and 34 are also rejected since claims 20 and 34 recite a system and method for transmitting data that contain substantially the same limitations as recited in claim 8.

2. Claims 10, 22, and 36 are rejected under 35 U.S.C. 103(a) as being unpatentable over "VNC", Fukasawa, and Mairs, and further in view of US Patent 5 818 877 to Tsai et al.

Regarding claim 10, "VNC", Fukasawa, and Mairs disclose the system according to claim 9.

"VNC", Fukasawa, and Mairs do not expressly disclose wherein the encoded output comprises one or more number pairs, wherein a first number of the number pair indicates the number of zeros in a current run, and wherein a second number of the number pair indicates a symbol following the last zero in the current run, however, Tsai does disclose these limitations (column 7, line 45-column 8, line 20).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of these references since Tsai discloses that using number pairs in an encoded output allows for greater compression (column 8, lines 16-20). In view of these specific advantages and that the references are directed to using temporal encoding to create an encoded output, one of ordinary skill would have been motivated to combine these references and would have considered them to be

analogous to one another based on their related fields of endeavor.

Claims 22 and 36 are also rejected since claims 22 and 36 recite a system and method from transferring data that contain substantially the same limitations as recited in claim 10.

3. Claims 12 and 33 are rejected under 35 U.S.C. 103(a) as being unpatentable over "VNC" and Fukasawa in view of US Patent 5 742 728 to Yanagihara et al.

Regarding claim 12, "VNC" and Fukasawa disclose the system according to claim 1.

"VNC" and Fukasawa do not disclose wherein the temporal compressor creates a lossless temporal encoding of the user data, however, Yanagihara does disclose this limitation. (column 1, lines 22-29, specifically "Huffman code")

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of these references since Yanagihara discloses that MPEG uses a lossless temporal encoding in order to compress video data. In view of these specific advantages and that the references are directed to using MPEG temporal encoding to create an encoded output, one of ordinary skill would have been motivated to combine these references and would have considered them to be

analogous to one another based on their related fields of endeavor.

Claim 33 is rejected since claim 33 recites a method that contains substantially the same limitations as recited in claim 12.

Allowable Subject Matter

Claims 11, 23, and 37 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

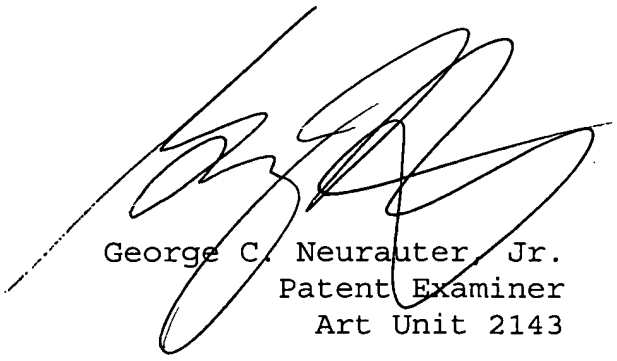
It is noted that the column, line, and/or page number citations used in the prior art references as applied by the Examiner to the claimed invention are for the convenience of the Applicant to represent the relevant teachings of the prior art. The prior art references may contain further teachings and/or suggestions that may further distinguish the citations applied to the claims, therefore, the Applicant should consider the entirety of these prior art references during the process of responding to this Office Action. It is further noted that any alternative and nonpreferred embodiments as taught and/or suggested within the prior art references also constitute prior art and the prior art references may be relied upon for all the

teachings would have reasonably suggested to one of ordinary skill in the art. See MPEP 2123.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to George C. Neurauter, Jr. whose telephone number is (571) 272-3918. The examiner can normally be reached on Monday through Friday from 9AM to 5:30PM Eastern.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Wiley can be reached on (571) 272-3923. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



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Art Unit 2143